

CLAIMS:

What is claimed is:

- 1 1. An integrated pixel sensor structure comprising:
2 a light sensitive diode including a transparent conductor;
3 and,
4 a protective layer placed above the transparent conductor,
5 the protective layer including a set of diffraction grating
6 elements for producing complementary colors.
- 1 2. The structure of claim 1, where the protective layer
2 includes anti-reflection properties.
- 3 3. The structure of claim 1, where the protective layer is a
4 material suitable for fabrication processes that are compatible
5 with the light sensitive diode.
- 1 4. The structure of claim 1, where the set of diffraction
2 grating elements include a set of four step echelon grating
3 elements.

1 5. A system comprising:

2 an integrated pixel sensor structure having:

3 a light sensitive diode including a transparent
4 conductor; and,

5 a protective layer placed above the transparent
6 conductor, the protective layer including a set of
7 diffraction grating elements for producing complementary
8 colors; and,

9 a post capture signal processing unit coupled to the *nominal*
10 integrated pixel sensor.

11 6. The system of claim 5, where the protective layer includes
12 anti-reflection properties.

13 ~~7. The system of claim 5, where the protective layer is a
material suitable for fabrication processes that are compatible
with the light sensitive diode.~~

1 8. The system of claim 5, where the set of diffraction grating
2 elements include a set of four step echelon grating elements.

1 9. An apparatus comprising:

2 a light sensitive means;

3 a transparent conductor means displaced above the light
4 sensitive means; and,

5 a protective layer means placed above the transparent
6 conductor means, the protective layer means including a set of
7 diffraction grating means for producing complementary colors.

1 10. The apparatus of claim 9, where the protective layer means
2 includes anti-reflection properties.

3 11. The apparatus of claim 9, where the protective layer means
4 is a material suitable for fabrication processes that are
5 compatible with the light sensitive means.

6 12. The apparatus of claim 9, where the set of diffraction
7 grating means include a set of four step echelon grating
8 elements.

1 13. A method comprising:

2 providing a light sensitive element;

3 placing a transparent conductor above the light sensitive
4 element; and,

5 placing a protective layer above the transparent conductor,
6 the protective layer including a set of diffraction grating
7 elements for producing complementary colors.

1 14. The method of claim 13, where placing the protective layer
2 includes placing a material with anti-reflection properties
3 above the transparent conductor.

1 15. The method of claim 13, where placing the protective layer
2 includes placing a material suitable for fabrication processes
3 that are compatible with the light sensitive element.

1 16. The method of claim 13, where the set of diffraction
2 grating elements include a set of four step echelon grating
3 elements.

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